

Remarks

Upon entry of the foregoing amendments, claims 1, 2, 6-9, 14, 17, 20, 37-40, 69 and 71-75 are pending in the application, with claims 1 and 2 being the independent claims. Claims 1 and 2 have been amended. No new matter has been added.

Applicants respectfully request that the Examiner consider the above amendments and the following remarks, and withdraw the outstanding rejections.

Rejections Under 35 U.S.C. § 112, First Paragraph

Claims 1, 2, 6-9, 14, 17, 20, 37-40, 69 and 71-75 were rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

The Office Action states that "[t]here is no disclosure of any particular structure to function/activity relationship for the claimed genus of mutant *Thermatoga neapolitana* DNA polymerases, given that *Thermatoga neapolitana* has a number of polymerases in addition to a Pol I type DNA polymerase." Office Action, pages 3-4. While Applicants respectfully disagree with this characterization, in an effort to advance prosecution the present claims have been amended to recite Pol I type DNA polymerases. The specification fully supports these claims, and is fully compliant with the written description requirement of 35 U.S.C. § 112, first paragraph.

The pending claims were also rejected under 35 U.S.C. § 112, first paragraph, due to the recitation of Lys726 being replaced with "...Leu, **Lys**, Met...", since replacement of Lys726 with Lys was not described in the specification. Office Action, page 4. Claims 1 and 2 as amended no longer recite Lys as a possible replacement for Lys726.

Applicants therefore respectfully request that the rejections under 35 U.S.C. § 112, first paragraph be reconsidered and withdrawn.

Rejection Under 35 U.S.C. § 102(e)

Claims 1, 2, 6-9, 14, 17, 20, 37-40, 69 and 71-75 were rejected under 35 U.S.C. § 102(e) as being anticipated by Chatterjee (U.S. Patent No. 5,948,614). The Office Action states that Chatterjee teaches a *Thermatoga* DNA polymerase mutant in which Arg722 is substituted with Asp, Glu, Ala, Asn, Lys or His, and a mutant in which Lys726 is substituted with Tyr, Arg, His or Asp. Claims 1 and 2 as amended recite only *Thermatoga neapolitana* double mutants which are neither taught nor suggested by Chatterjee.

In view of these claim amendments, reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(e) is respectfully requested.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for immediate allowance. Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "Brian J. Del Buono", with a large, sweeping flourish at the end.

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